

31st IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)  
Interactive Presentations - 31st IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND  
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DESIGNING AN OPEN ARCHITECTURE FOR A LOW COST MOON VILLAGE

**Abstract**

The Moon Village is envisioned as a paradigm shift that requires a fundamental change in our thinking about the way we design and govern international space exploration projects. Recently a workshop hosted by Silicon Valley VC Steve Jurvetson explored whether a lunar settlement could be possible for a few billion dollars (rather than the tens of billions, or more, regularly cited). The workshop concluded that it would cost *3–5 Billion USD to create a self-sustainable human settlement for two humans. However, outdated approaches are holding*

Historically, settlement architectures have been presented as static documents that represent a snapshot of thinking and capabilities at the time of its release. These architectures cannot evolve over time to incorporate new developments, preventing them from being a functional resource. What if we could create an open, modular, and dynamic online repository of key components required for Lunar settlement, such that different solution sets can be explored, opportunities and gaps identified? And what would it take for this open architecture to succeed? At the core of every open concept lie a set of values and design principles. Working open means your organization, programs, services, and ideas, are i) created with the intent to be understood, ii) designed to be extended, and iii) organized around participation. We have noticed a powerful social phenomenon in many projects that are built on these principles: well-intentioned people can collaborate across broader sets of diversity than you might expect. Of course, the learning—the solving of complex challenges, and the collaborating across boundaries—is something that we all need to do together. We know that working open is not always easy. But we have seen it produce results. This presentation will focus on describing the open design principles and patterns and how they can be applied in the space sector to ensure that the much-needed lunar exploration coordination takes root and flourish.